1. This office action is in response to the RCE filed on 11/13/09.

2. Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Luke A. Kilyk on January 6, 2010.

The application has been amended as follows:

With regards to **claim 1**, replace:

"1. An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height

direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window set by the edge window setting unit has a height that is equal to the height of each of the plurality of window elements."

with

--1. An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window set by the edge window setting unit has a height that is equal to the height of each of the plurality of window elements

wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user.--

With regards to **claim 4**, replace:

" A record medium including a program executable on an image processing apparatus, the program comprising instructions having:

a first function of setting an edge window for detecting an edge of a workpiece;

a second function of selectively setting a plurality of window elements in the one edge window set by said first function, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

a third function of scanning each of the window elements and obtaining edges for each window element; and

a fourth function of obtaining edge related information from the edges detected in the third function and for calculating width between the edges in a height direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window has a height that is equal to the height of each of the plurality of window elements."

with

-- A record medium including a program executable on an image processing apparatus, the program comprising instructions having:

a first function of setting an edge window for detecting an edge of a workpiece;

a second function of selectively setting a plurality of window elements in the one edge window set by said first function, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

a third function of scanning each of the window elements and obtaining edges for each window element; and

a fourth function of obtaining edge related information from the edges detected in the third function and for calculating width between the edges in a height direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window has a height that is equal to the height of each of the plurality of window elements,

wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user.--

With regards to **claim 5**, replace:

" An image processing method comprising:

setting an edge window for detecting an edge of a workpiece;

selectively setting a plurality of window elements in the one edge window, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

scanning each of the window elements and obtaining edges for each window element; and

obtaining edge related information from the edges detected and for calculating width between the edges in a height direction in each of the window elements and obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window has a height that is equal to the height of each of the plurality of window elements."

with

-- An image processing method performed by an image processing apparatus comprising:

setting an edge window for detecting an edge of a workpiece;

selectively setting a plurality of window elements in the one edge window, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

scanning each of the window elements and obtaining edges for each window element; and

obtaining edge related information from the edges detected and for calculating width between the edges in a height direction in each of the window elements and obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said edge window has a height that is equal to the height of each of the plurality of window elements,

wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user.--

With regards to **claim 15**, replace:

" An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, wherein a user defines at least one of the number of window elements and the width of each of the window elements, and the height of the edge window is equal to the height of the plurality of window elements;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height direction in each of the window elements, and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements."

with

-- An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, wherein a user defines at least one of the number of window elements and the width of each of the window elements, and the height of the edge window is equal to the height of the plurality of window elements;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height direction in each of the window elements, and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user.--

With regards to **claim 20**, replace:

" An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining an edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein a user selects a width of each window element, and the user selects a distance from a start coordinate of a first window element to a start coordinate for each additional window element."

with

-- An image processing apparatus comprising:

an edge window setting unit for setting an edge window for detecting an edge of a workpiece;

an element setting unit for selectively setting a plurality of window elements in the one edge window set by said edge window setting unit, such that the window elements are capable of mutually overlapping in the width direction of the edge window;

an edge detection unit for scanning each of the window elements and obtaining edges for each window element; and

a calculation unit for obtaining an edge related information from the edges detected by said edge detection unit and for calculating width between the edges in a height direction in each of the window elements and for obtaining at least one of maximum width, minimum width, or average value in the width detected in each of said window elements,

wherein a user selects a width of each window element, and the user selects a distance from a start coordinate of a first window element to a start coordinate for each additional window element,

wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user.--

Claim 8 is cancelled.

3. Reasons for Allowance

Claims 1-7, 9-11 and 13-23 are allowable.

With regards to claim 1, the examiner cannot find any applicable prior art providing motivation to combine limitation: wherein said plurality of window elements has a width and there is a distance between the beginning of each of the said window elements, wherein said width or said distance are assigned automatically inside said edge window by specifying the number of window elements by the user with the rest of the limitations of claim 1.

With regards to claims 4, 5, 15 and 20, see the rationale for claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX LIEW whose telephone number is (571)272-8623 or cell (917)763-1192. The examiner can be reached anytime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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